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SUBJECT: S&T AGREEMENT: S&T INFORMATION: DEVELOPMENT AND
TESTING OF COMMON COMMUNICATIONS FORMAT FOR
EXCHANGE OF BIBLIOGRAPHIC DATA
 FOR SCICQUNS

REQUEST EMBASSY, ON BEHALF OF US GROUP COORDINATOR,
 THOMAS E. HUGHES, AEC, ASK G. T. ARTAMONOV, DIRECTOR, ALL
 UNION INSTITUTE OF INTERBRANCH INFORMATION AND SPECIAL
 CONSULTANT TO SCST, FOR SOVIET STATE STANDARDS AND
 CHARACTER SETS ON COMPUTER BIT CODING OF CYRILLIC
 CHARACTERS USED BY VINITI AND STATE PUBLIC SCIENTIFIC
 AND TECHNICAL LIBRARY. INFORMATION NEEDED FOR DECEMBER
 10 PLANNING MEETING OF US PARTICIPATING ORGANIZATIONS.
 REQUEST SOVIET REPLY BE AIR POUCHED TO DEPARTMENT. INGERSOLL

1. LESS ^{INFO}
 2. E&S-file
 (may not have
 1974 folder yet)

S&T Information

State Dept. declassification & release instructions on file

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NATIONAL SCIENCE FOUNDATION

WASHINGTON, D.C. 20550

Office of Science Information Service

STATINTL

October 11, 1974

MEMORANDUM TO: Dr. Oswald Ganley
Executive Secretary
U.S.-U.S.S.R. Programs Secretariat
U.S. Department of State

SUBJECT: Report on First Meeting of U.S.-U.S.S.R. Joint Working Group on Scientific and Technical Information, Moscow, 16-17 June 1974

Attached are copies of the Memorandum of the Joint Working Group's meeting together with the agreements reached on the work plans for three projects. The US/USSR Joint Working Group recommends approval of these agreements by the Joint Commissions.

At its November 1973 meeting, the U.S./U.S.S.R. approved three projects in the field of scientific and technical information. These are:

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4mil
Commerce

1. Development and testing of a common format for the exchange of bibliographic information;
2. A joint seminar on improving methods for forecasting information requirements and needs;
3. A joint seminar on methods of developing practical means of measuring the cost/effectiveness of scientific and technical information systems.

During the first meeting of the Joint Working Group in Moscow on September 16-17, 1974, detailed plans were agreed to for cooperative work on all three topics.

In the first stage of work on the common format, cooperating organizations in the U.S. and in the Soviet Union will exchange samples of computer tapes, manuals, and other explanatory materials. Cooperating organizations of the U.S. side will include the AEC, Chemical Abstracts Service, Library of Congress, and NTIS. Soviet counterpart organizations are: All-Union Institute for Scientific and Technical Information, All-Union Institute of Interbranch Information, and the State Public Scientific and Technical Library of the USSR.

STI Information

-Page 2-

The U.S. team for the common format project, headed by Tom Hughes, Chief, Systems Development Branch, Office of Information Services, AEC, arrived the previous week, and worked out detailed plans with their Soviet counterparts. He was aided by his two colleagues on this project, Larry Livingston, Council of Library Resources, Inc. and James Wood, Chemical Abstracts Service, American Chemical Society. Soviets working on this project are: Dr. G.T. Artamonov, Director, All-Union Institute of Interbranch Information; Dr. R.S. Gilyarevskiy, Deputy Director, All-Union Institute for Scientific and Technical Information; and Dr. V.I. Tarasov, Deputy Director, State Public Scientific and Technical Library of the USSR.

Following study of each other's tapes and materials, the joint project group will meet in the United States--probably in April 1975.

Plans also were set for the two seminars. Dr. Tefko Saracevic, Case Western Reserve University, representing Dr. Derek deSolla Price, Chairman of the U.S. team for the forecasting seminar, negotiated for the U.S. side. Dr. Sanford Berg, University of Florida, negotiated the seminar on cost/benefit in place of Dr. Edwin Mansfield, University of Pennsylvania. In each case, agreement was reached on the topics to be covered and a time schedule for exchanging papers prior to each seminar.

The cost/effectiveness seminar will be held in June 1975 in the U.S.S.R., while the forecasting seminar will be held in the U.S. in October 1975. The second meeting of the Joint Working Group will be held in conjunction with the forecasting seminar.

No serious difficulties were encountered in negotiating with the Soviets. Planned activities should bring benefits to the U.S. as well as to the U.S.S.R. Rapprochement with the Soviets has had both positive and negative international consequences in the science information field. On the positive side, we are learning about their systems in depth, and stand to gain machine-readable access to their bibliographic files. Also, detente and our cooperative work has removed much of the previous heavy Soviet rhetoric and propaganda moves from international forums such as UNESCO. In UNISIST and during the recent UNESCO Intergovernmental Conference, the U.S. and U.S.S.R. frequently joined forces on issues. The negative result is more of an indirect development. European

-Page 3-

and Latin American colleagues expressed some concern over the strength of US/USSR science bilateralism. They feel left out. During the UNESCO Intergovernmental Conference, I took some initial steps to defuse European concerns in the science information area.

Lee G. Burchinal

Lee G. Burchinal

Chairman

Working Group on Scientific
and Technical Information

AGREEMENTS
ON
US/USSR SCIENTIFIC AND TECHNICAL INFORMATION PROJECTS

First Meeting of US/USSR Joint
Working Group on Scientific and Technical
Information

(Moscow, September 16 - 17, 1974)

Agreements on
US/USSR Scientific and Technical Information Projects

First Meeting of US/USSR Joint
Working Group on Scientific and Technical
Information

(Moscow, September 16 - 17, 1974)

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M E M O R A N D U M

on the
First Meeting of US/USSR Joint
Working Group on Scientific and Technical
Information

(Moscow, September 16 - 17, 1974)

Following the decision of the Second session of the Joint US/USSR Commission on Scientific and Technical Cooperation, the first meeting of the US/USSR Joint Working Group on Scientific and Technical Information was held in Moscow on 16th - 17th of September 1974.

The US delegation was headed by Dr. Lee G. Burchinal, Head, Office of Science Information Services, National Science Foundation. The Soviet delegation was headed by Mr. N. B. Arutiunov, the Head of the Directorate of Scientific and Technical Information of the State Committee for Science and Technology of the USSR Council of Ministers. Members of the US and USSR delegations are listed in Appendix 1.

Following the agenda, the US/USSR Joint Working Group on Scientific and Technical Information considered three reports:

1. The results of the first meeting of US/USSR research group on the development and testing of a common communications format for exchange of scientific and technological information between the two countries (Appendix 2).
2. Draft of the working plan on improving methods of forecasting information requirements and needs (Appendix 3).
3. Plans for the first US/USSR symposium on development of practical techniques for evaluating the economic effectiveness of information service (Appendix 4).

The Joint Working Group agreed to seek or arrange for translation and limited copying of material necessary for the work of three research groups.

The report of the activities of the US/USSR Joint Working Group on Scientific and Technical Information will be submitted for consideration and approval by the US/USSR Joint Commission for Scientific and Technical Cooperation at its next meeting.

The second meeting of the US/USSR Joint Working Group on Scientific and Technical Information will be held in the USA in October 1975.

Done in Moscow on September 17, 1974 in duplicate, in English and Russian, with the languages of both texts being equally authentic.

/s/

LEE G. BURCHINAL
Head
U.S. Delegation

/s/

N. B. ARUTIUNOV
Head
U.S.S.R. Delegation

List of Participants
First Meeting US/USSR Joint Working Group
on
Scientific and Technical Information

UNITED STATES

Dr. Lee G. Burchinal, Co-Chairman
Head, Office of Science Information Service
National Science Foundation

Mr. Thomas E. Hughes
Chief, Systems Development Branch
Office of Information Services
Atomic Energy Commission

Mr. Lawrence Livingston
Program Officer
Council on Library Resources, Inc.

Mr. James L. Wood
Director of Bibliographic Support Division
Chemical Abstracts Service

Professor Tefko Saracevic
School of Library Science
Case Western Reserve University

Professor Sanford Berg
Department of Economics
University of Florida

USSR

Eng. Nikolai B. Arutiunov, Co-Chairman
Chief, Administration for S&T Information
State Committee for Science and Technology
U.S.S.R. Council of Ministers

Professor G.T. Artamonov
(Project Coordinator)
Director, All-Union Institute of Interbranch
Information (VIMI)

Dr. R. S. Gilyarevsky
Deputy Director, All-Union
Institute for Scientific and Technical Information (VINITI)

Professor V. S. Malov
(Project Coordinator)
Director, All-Union Scientific and Technical
Information Center (VNTIC)

Dr. V. M. Bajkovskij
Deputy Director, Central Scientific Research
Institute for Information and Technical Co-Economic
Research in Instrument Making

Dr. M. M. Lopukhin
Director, All-Union Scientific Research Center
for Information (VNICI)

B. A. Krasnov
Head, Department of Information
Dissemination, State Committee for Science
and Technology

A. P. Metalnikov
Deputy Chief, USA Division
Foreign Relations Department
State Committee for Science and Technology

V. A. Rukhadze
Director, Central Scientific
Research Institute for Information and
Technical Co-Economic Research in
Instrument Making

Dr. L. F. Sarukhanyan
Director, Armenian Research Institute for
Scientific and Technical Information

L. V. Jakovleva
Chief of the group, VNTIC

APPENDIX 2

Meeting of the US/USSR Research Group on
"Development and Testing of a Common
Communications Format for Exchange of
Scientific and Technical Information Between
the Two Countries"

(Moscow, 10 - 12 September 1974)

Following the decision of the second session of the Joint US/USSR Commission on Scientific and Technical Cooperation, the first meeting of the Joint US/USSR Research Group on the "Development and Testing of a Common Communications Format" for the exchange of scientific and technical information between the two countries was held in Moscow in September 1974.

The meeting was preceded by a mutual exchange of documents setting forth basic methods for the accomplishment of joint work. In June 1974 the Soviet side delivered to their American counterparts "The Program of Joint Development of Machine-Readable Format of Bibliographic Record for 1974 - 1975". In July 1974 the American side sent to the Soviet side a Draft Project Plan to carry out similar work.

At the meeting on September 10 - 12, 1974, the Joint Research Group agreed to submit the following proposals to the US/USSR Joint Working Group on Scientific and Technical Information:

- (1) The development and testing of a common communications format for the exchange of bibliographic data should be completed by the end of 1977 to permit adoption of operational versions for the exchange of scientific and technical information on magnetic tapes in 1978.
- (2) The research group feels that a detailed plan of work can be reasonably projected only for a year at a time at periodic meetings.

- (3) The work on the development and testing of a common communications format for exchange of bibliographic data should result in an agreed set of the following documents:
 - 3.1 - generalized record format (record structure);
 - 3.2 - a list of data elements and a system for identifying them;
 - 3.3 - a set of rules for recording data elements in accordance with Sec. 3.2;
 - 3.4 - a set of rules for using language codes, country codes, standards, lists of abbreviations, classification schemes, etc.;
 - 3.5 - a character set to be used by the system and methods of their coding;
 - 3.6 - rules for changing and amplifying the communications format.
- (4) It is assumed that the format will be implemented to describe the following kinds of documents (in order of implementation):
 - 4.1 - monographs
 - 4.2 - periodicals and serials
 - 4.3 - articles, preprints
 - 4.4 - patents
 - 4.5 - technical reports.
- (5) All implemented formats will be in English for documents described by the American side and in Russian for documents described by the Soviet side.
- (6) It is suggested that between the fourth Quarter 1974 and the third Quarter 1975 the work will follow the schedule described in the attachment.
- (7) In the course of work the draft plan may be revised at the initiative of one of the sides with the consent of the other.
- (8) At the suggestion of the American side, national organizations to participate in the experimental work will be named in the fourth Quarter 1974.

(9) Documents developed in arranging for the mutual exchange of information may be recommended by each side for use in their own organizations.

/s/

Head of the Working Group
USA
Mr. T. E. Hughes

/s/

Head of the Working Group
USSR
Dr. G. T. Artamonov

WORK PLAN

for

Joint Research in Developing a Common Communications Format
for Bibliographic Data Exchange
(IV 1974 - III 1975)

Appr.

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<u>Work Stage</u>	<u>Completion Date</u> (Qtr., Year)	<u>Form of Results</u>
Designate organizations which will participate in the experiment to exchange information files, and mutual exchange of file documentation	IV 1974	Names of organizations and specialists (standards, computer configurations, etc.)
Exchange experimental data files in machine-readable form (magnetic tapes) according to national standards rules. (Types of documents in file: monographs, periodical publications)	I 1974	Magnetic tapes with 1,500 - 2,000 items and accompanying documentation.
Compilation of a list of corporate authors and publishers for development of common codes for representation in the format	II 1975	
Proposals for a record and alphabet structure	IV 1974 - II 1975 December 1974 - First draft edited March 1975 - Second draft edited June 1975 - Agreement on versions of codes	Lists of Organizations. U.S. provides a list of USSR organizations and vice versa with codes.
Determine lists of data elements and systems for identifying them	II - III 1975 II - First version III - Draft	Draft standards
	I - III 1975 I - First editing II - Intermediate editing III - Agreed on edited version	Agreed upon lists of data elements and their identifiers

APPENDIX 3

Meeting of the US-USSR Research Group on
"Improvement in Methods of Forecasting
Information Requirements and Services"

(Moscow, 16-17 September 1974)

Following the decision of the second Session of the Joint Working Group on Cooperation in Scientific and Technical Information, a meeting of the Joint US/USSR Research Group on "Improvement in Methods of Forecasting Information Requirements and Services" was held in Moscow on 16-17 September 1974.

The meeting was preceded by mutual exchange of proposals setting forth basic content and methods for the fulfilment of the joint work. The US group submitted a Draft Project Plan with five problem areas of initial work.

The USSR Group suggested four problem areas of initial work. Each side reviewed the proposals and found them in basic agreement.

At the meeting of the Joint Working Group on Scientific and Technical Information, the following plan was agreed upon for the Research Group on "Improvement in Methods of Forecasting Information Requirements and Services" for 1974-1975.

I. Symposium

1. A four-day symposium, entitled "Forecasting Information Requirements and Services" will be held in the USA in October 1975.
2. The exact dates of the symposium will be determined so to precede or follow the Annual Meeting of the American Society of Information Science, at which meeting Soviet scientists will also have an opportunity to present papers.
3. The participants at the symposium will include five to ten Soviet scientists and 10 to 15 U.S. scientists, who will present papers on topics agreed upon below. Observers may also be invited.

4. The objectives of the symposium are:
 - (a) to synthesize, critically review and compare the work on forecasting performed to date in both countries;
 - (b) to encourage and enlarge the work on this topic in both countries in a manner that may be useful for practical decision-making as well as for furthering theoretical and experimental investigations.
 - (c) to outline the main tasks to be fulfilled in the near future.
5. The content of studies presented at the symposium shall include analyses of:
 - (a) Scientific and technical literature and data: specification of indicators; measurement of production, dynamics and growth and spread of literature and data. The orientation of the studies should be toward the choice of compatible indicators to serve as a base for the elaboration of forecasts. These studies could provide the basis for a similar UNISIST-managed world-wide effort.
 - (b) Use and Users of Scientific and Technical Literature: specification of direct and unobtrusive indicators of use; citation practices of scientists in both countries; cross-citations between US and USSR scientific and technical literatures; analysis of usage of information centres, services and libraries; critical review of previous user studies and their practical applicability for forecasting.
 - (c) Theoretical and Methodological Work: development of theories and methods pertaining to the above-mentioned studies of literature, use, users and forecasting in general; adaptation of theories from other fields of use in these areas.

(d) Information Systems and Services: trends in the development; network arrangements; directions of primary journal publications; future coverage of secondary services, directions of use of SDI services, on-line retrieval, retrospective services; directions in obtaining of hard copies; relations between automatized information centres and traditional libraries; developments in data transmission and utilization.

6. Conduct of the Symposium:

- (a) each topic will be covered by two to four papers. It is not necessary that for each paper on one side there will be a reciprocal paper on the other side, rather the papers shall reflect the work of scientists on each side.
- (b) the participants shall include scientists directly working in the given areas as well as scientists whose work is related to the areas.
- (c) the papers will be presented in the language of the authors with translation; the discussion will be conducted in any of the two languages with translation.
- (d) from the outset and during the conduct of their studies scientists working in similar areas shall exchange definitions, progress reports, methodologies and references to ensure uniformity of understanding and compatibility of results.

7. Time-table

By 1 November 1974:

- exchange of materials for use in conducting studies and preparing papers;
- exchange of reference material of use in definition of terms and clarification of concepts.

By 1 December 1974:

- specification of exact topics of studies and naming of scientists who will conduct and present the studies so that they will have sufficient time to prepare thorough studies;
- specification of the dates and place of the symposium.

By 1 February 1975:

- exchange of progress reports methodologies and references between scientists working in similar areas.

By 1 May 1975:

- exchange of titles and abstracts of papers.

By 1 August 1975:

- exchange of full texts of papers accompanied by translation.

October 1975:

- Symposium
- Second Meeting of the US/USSR Research Group on "Improvement in Methods of Forecasting Information Requirements and Services".
- Annual Meeting of the American Society for Information Science

II. Uniformity of Concepts and Methods

It is recognized by both sides that uniformity and standardization in definitions and methods is essential for mutual understanding, communication and comparison of results. Therefore, the joint effort shall include specification of concepts and terms that need common definition on both sides as well as the definitions themselves. In particular, this shall include specification of indicators and methodologies. To that effect each side shall prepare a list of concepts, terms, indicators and methods that need a definition, suggest definitions and exchange these with the other side.

As the first step, each side shall collect and exchange existing reference materials, standards, review articles, texts and the like which can serve as the base for achieving uniformity. At the symposium there shall be working discussion on this topic.

/s/

Prof. T. Saracevic (US)

/s/

Dr. R. Giljarevskij (USSR)

APPENDIX 4

Plan For the First US/USSR Symposium on "Methods
for Estimating Costs and Benefits of
Information Services"

(Moscow, September 16 - 17, 1974)

1. A three-day Symposium will take place in the USSR in June 1975.
2. The symposium will focus on the theoretical bases for developing economic criteria for evaluation of the effectiveness of scientific and technical information services.
3. The following topics are proposed for discussion:
 - (a) The principles of criteria selection for determining the economic returns to scientific and technical information at the following levels:
 - society as a whole (national economic effect)
 - single sector (industry)
 - single organization (company, research institution).

The elements to be considered include the capabilities of advanced techniques for evaluating company information needs, approaches to financing the acquisition of information, effectiveness criteria for performing engineering calculations in designing information systems, and the determination of the effects of scientific and technical information on technological development and efficiency in the three levels of the economy noted above.

- (b) Evaluation of possibility of application of mathematical, economic and econometric models. This modeling and empirical effort will be focused on estimating cost-benefits stemming from the provision of information services to systems performing the functions of management, research and development, innovation, and the practical application of scientific and technical results.

-PAGE 2-

- (c) Case studies of the measurement of benefits from scientific and technological information.
- 4. The preparation of procedure of symposium:
 - (a) The preparation of papers by each party shall include:
 - exchange of authors' names, titles and annotations of papers by February 15;
 - translation of papers into the language of the other country - on the side of the US - into Russian; and on the side of the USSR - into English;
 - distribution of papers translated in two languages among the members of the Project 3 Joint Research Group and participants in the symposium;
 - (b) Papers in both languages will be distributed before April 25, 1975.
- 5. With the aim of securing better mutual understanding of basic concepts in this problem area, during the period of symposium preparation, both sides will work toward the development of a bilingual terminological dictionary. The exchange of preliminary material for the dictionary will be completed by February 10, 1975. Each side will make corrections and comments before May 1, 1975. We expect the dictionary to facilitate discussion at the symposium.
- 6. The procedure of holding of symposium:
 - (a) The number of papers submitted should not exceed six from each side. Each paper should not exceed 25 double-spaced typewritten pages;
 - (b) The number of the symposium participants will be determined by the number of paper-readers and members of the Joint US/USSR Research Group. The total number of the participants should not exceed the following quotas:
 - on the side of the host country - 25 people,
 - on the side of the country-participant - 10 people (including members of the US Research Group).

(c) The results of the symposium will be published in the form of:

- the memorandum,
- the collection of the symposium papers from each side, in the language appropriate for each country.

September 17, 1974
Moscow, USSR

/s/
Prof. S. Berg (USA)

/s/
Prof. V. Malov (USSR)

U.S.-U.S.S.R. Agreement on Scientific and Technical Cooperation, dated May 24, 1972

Areas of Cooperation:

Chemical Catalysis	Production of Substances by Microbiological Means
Application of Computers to Management	Physics, Special Topics in Science Policy
Electrometallurgy	Scientific and Technical Information
Forestry Research and Technology	Standardization
Intellectual Property	Water Resources
Metrology	

Above Areas in which specific projects have been approved, and U.S. Project Coordinators named:

Chemical Catalysis
Application of Computers to Management
Electrometallurgy
Production of Substances by Microbiological Means
Science Policy
Scientific and Technical Information
Water Resources

Lists of U.S. Working Groups and Project Coordinators:

With exception of the following, membership of active working groups and listings of Project Coordinators attached:

Metrology) recently split into the two working
Standardization) groups; listings being revised.

Intellectual Property - membership of U.S. Group just completed; list to be prepared

Physics - Dr. Pines does not have formal working group

10/7/74

U.S.-U.S.S.R. Joint Commission
on Scientific and Technical Cooperation

U.S. WORKING GROUP ON SCIENTIFIC
AND TECHNICAL INFORMATION
Project Coordinators

Chairman

Dr. Lee G. Burchinal 202-632/5824
Head, Office of Science
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National Science Foundation
1800 G Street, N.W.
Washington, D.C. 20550

TELEX: RCA 24521
NASCF UR
WU 89-2438

Project Coordinators

1. Development and Testing of
Common Communications Format
for Bibliographic Data Exchange

Mr. Thomas E. Hughes
Chief, Systems Development Branch
Office of Information Services
U.S. Atomic Energy Commission
Washington, D.C. 20545

202-973/4035

2. Improving Methods of Forecasting
Information Requirements and
Services

Dr. Derek J. de Solla Price
Avalon Professor of History
of Science
Yale University
2036 Yale Station
New Haven, Connecticut 06520

203-436/4366

3. Estimating Costs and Benefits
of Information Services

Dr. Edwin Mansfield
Professor, Department of Economics
The Wharton School
University of Pennsylvania
Philadelphia, Pennsylvania 19104

215-594/7788

Where available, telex or TWX service
identified; otherwise only office
telephone numbers listed.

9/28

NATIONAL SCIENCE FOUNDATION

WASHINGTON, D.C. 20530

Office of Science Information Service

The US delegation
made the trip to the
USSR as scheduled

August 29, 1974

R

STATINTL

Mr. N. B. Arutyunov
Director, Directorate of Scientific
and Technical Information
State Committee for Science and
Technology, USSR Council of Ministers
11 Gorky Street
Moscow, USSR

Dear Eng. Arutyunov:

I have received your letter of August 13 and am pleased that we agree on the program and schedule for the first meeting of the Joint Working Group, the Project Group on a Common Communications Format, and the visits of the American specialists to Soviet information centers.

I recognize the need to complete the Joint Working Group's business on September 17 so that you can depart for the Paris meeting of the Bureau of the UNISIST Steering Committee on the morning of the 18th. Since we both will be attending the Paris meeting, I will plan to leave Moscow with you on the same morning flight (Aeroflot 251).

To expedite the Joint Working Group's sessions within the two day period, perhaps we should meet before Monday, September 16, to discuss procedure and agenda. I expect to arrive in Moscow shortly after noon on Friday, September 13, and will be available to meet with you that afternoon or evening, or any time at your convenience on September 14 or 15.

As to one point of procedure, I suggest that the Soviet draft project plan on a common communications format be used as the basic working document at the meeting of the American and Soviet specialists on September 9-11. I further suggest that the U.S. draft project plans for the other two topics serve as the basis for discussion during the Joint Working Group meeting.

To assist the American and U.S. specialists in their discussions on a common communications format, September 9-11, I have asked Adam Wysocki to send you copies of the UNISIST Reference Manual. He informs me that three copies were airmailed to you on August 28.

Soviet Information

Under separate cover, via the American Embassy, I am sending you the following materials:

- (1) "The USSR Scientific and Technical Information System: A U.S. View", Report of the U.S. Participants in the US/USSR Symposium on Scientific and Technical Information, held in Moscow, June 18-30, 1973 (15 copies). I am pleased to reciprocate free rights to translation and reproduction of this report for distribution in the Soviet Union and Comecon countries.
- (2) Eleven sets of photographs taken during the Second Symposium at Reston, Virginia.
- (3) Copies of visuals shown during several presentations the Soviet specialists attended during their visit to various information centers in the United States last October.
- (4) Tapes of the October 1-2, 1973 US/USSR Symposium at Reston. Dr. V. G. Rukhadze, in particular, asked if we could provide them since his tape recorder was not functioning properly at the time.
- (5) "U.S.-U.S.S.R. Copyright Negotiations on Scientific and Technical Journals", a Survey Report Prepared by the National Science Foundation, June 1974 (2 copies). We have tried to monitor the U.S. publishing community's negotiations with Soviet organizations since your country joined the Universal Copyright Convention last year. The survey of U.S. publishers was conducted in March-April of this year.

I look forward to meeting with you and the other Soviet specialists in Moscow.

Sincerely,

Lee G. Burchinal
Head

Enclosures: Under separate cover as stated

cc: Dr. J. L. Tech, U.S. Embassy, Moscow (Original + 1cc)
US-USSR Program Secretariat, Dept. of State

Dr. John Thomas, OIP

Dr. Burchinal

DI: Barenki
Mr. Pronko

AP/NT Rda.

AB/R1 Reg.
Chron

chron
circ

CIRC
File

File

STATINTL

U.S.-U.S.S.R. Joint Commission
on Scientific and Technical Cooperation

U.S. WORKING GROUP ON
SCIENTIFIC AND TECHNICAL INFORMATION

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of Science
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Mr. Thomas E. Hughes
Chief, Systems Development Branch
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OSI
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Dr. Edwin Mansfield
Department of Economics
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U.S.-U.S.S.R. Joint Commission
on Scientific and Technical Cooperation

U.S. PROJECT GROUP ON ESTIMATING
COSTS AND BENEFITS OF INFORMATION SERVICES

Dr. Edwin Mansfield (Project Coordinator) 215-594/7788
Department of Economics
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University of Pennsylvania
Philadelphia, Pennsylvania 19104

Professor William J. Baumol 609-452/4006
Department of Economics
Princeton University
Princeton, New Jersey 08540

Professor Sanford Berg 904-392/0132
Department of Economics
University of Florida
Gainesville, Florida 32601

6/28/74

U.S.-U.S.S.R. Joint Commission
on Scientific and Technical Cooperation

U.S. PROJECT GROUP ON IMPROVING METHODS
OF FORECASTING INFORMATION REQUIREMENTS AND SERVICES

Dr. Derek J. de Solla Price (Project Coordinator) 202-436/4366
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U.S.-U.S.S.R. Joint Commission
on Scientific and Technical Cooperation

U.S. PROJECT GROUP ON DEVELOPMENT AND TESTING
OF COMMON COMMUNICATIONS FORMAT FOR BIBLIOGRAPHIC
DATA EXCHANGE

Mr. Thomas E. Hughes (Project Coordinator) Chief, Systems Development Branch Office of Information Services Atomic Energy Commission Washington, D.C. 20545	202-973/4035
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Office of Science Information Service

STATINTL

June 28, 1974

Mr. N. B. Arutyunov
Director
Directorate of Scientific
and Technical Information
State Committee of USSR Council
of Ministers for Science and Technology
11 Gorky Street
Moscow, USSR

Dear Mr. Arutyunov:

We agreed to exchange plans in June for the three areas of activities under the US/USSR Joint Working Group on Scientific and Technical Information.

Names of the U.S. members of the Joint Working Group and of the three teams and our initial plans are enclosed.

I assume we still plan to hold the meeting of the Joint Working Group in Moscow on September 16-18. Because of commitments here, I will not be able to arrive until September 14 or 15. However, I believe it would be useful for the Project Group on Common Communications Formation to work together during the week of September 9. Considerable time and interaction between the U.S.S.R. and U.S. project team members will be necessary, we think, to draft plans for this activity. Plans could then be reviewed by the Joint Working Group in our meeting beginning September 16.

For the other two topics, we should be able to work out plans during the Joint Working Group meeting.

Several of the U.S. participants would like to visit U.S.S.R. facilities following the meeting on September 16-18. I will forward information about their interests to you shortly.

Perhaps we can exchange views on the other country's plans at least once before our September meeting. I will respond shortly after receiving your plans. To expedite your comments, I suggest you send them via Jack Tech, Science Attaché at the U.S. Embassy in Moscow.

CC: LESS
CFS / Allie
HAWK
OSI
CFS /
OKR /
WAPP
file
folder
GFT Information

-2-

I look forward to meeting with you and our Soviet colleagues in September as we advance the mutual cooperation in scientific and technical information that was begun so well in 1973.

Sincerely,

Lee G. Burchinal
Head

Enclosures: 1 - Three Draft Project Plans

2 - List of U.S. Members of Joint Working Group and Project Groups

bcc: Dr. Royal Wald, Department of State/SCI
✓ Dr. Jack Tech, U.S. Embassy, Moscow - Original w/1 cc
✓ Dr. Oswald Ganley, Department of State/SCI w/2 cc
Dr. John Thomas, OIP
Dr. Burchinal
Mr. Pronko
CIRC
CHRON
AD/NI Read
FILE: US/USSR Bilateral Agreement

CSG:SIS:EPRONKO:dhf:6/28/74:25706.

US-USSR COOPERATION IN SCIENTIFIC AND TECHNICAL INFORMATION

DRAFT PROJECT PLAN
for

Project No. 1 - Development and Testing of a Common Communications
Format for Bibliographic Data Exchange

A three year effort, from 1974 to 1977, is proposed. The exact phasing of tasks will be determined at the joint meeting of the US-USSR Project Group in September 1974.

The following joint efforts are suggested:

1. The development of an agreed set of conventions to accommodate all forms of bibliographic material, consisting of:
 - a. A generalized record format (the "carrier" of the bibliographic record).
 - b. Data elements and tagging structure (content identifiers).
 - c. Content specifications for the data elements (including country codes, language codes, cataloging rules).
 - d. Character set extensions.
2. The design and conduct of a series of tests in which the full range of bibliographic descriptions will be exchanged between libraries and abstracting and indexing services of the two countries using the agreed set indicated in 1.
3. Evaluation of the tests in accordance with agreed criteria and, if necessary, revision of specifications in the set of conventions prior to initiation of bibliographic information exchange.

In reference to effort 1a, it is proposed that maximum use be made of existing international standards and guides (such as the Reference Manual prepared by the UNISIST-ICSU/AB Working Group on Bibliographic Description) and that

ongoing standardization work be identified and utilized as a basis for arriving at the agreed set. Accordingly, ISO 2709-1973 (Documentation-Format for Bibliographic Information Interchange on Magnetic Tape) is recommended for 1a as the generalized record format.

In reference to effort 1b-d, it is proposed that close liaison be established with ISO TC/46, the UNISIST Working Group on Bibliographic Data Interchange, IFLA and ICSU/AB to obtain the latest information on the status of standards development in these areas and to draw upon any results available. For example, ISO TC/46 SC4 has a Working Group on Character Sets and IFLA has issued the International Standard Bibliographic Description (ISBD), one for single volume and multi-volume monographic publication and another for serials, both designed as an instrument for the international communication of bibliographic information. In addition, an IFLA Working Group on Content Designators exists.

In reference to both efforts 1 and 2, it is proposed that priority be given to serials, technical reports, monographs, and papers contained therein (analytics). For serials, the ISDS Guidelines being applied by the Moscow Regional Center for ISDS and its U.S. counterpart should be carefully studied for efforts 1b-c. This ISDS record could be amplified for purposes of this binational project wherever necessary (e.g., the data element "issuing body," to achieve greater compatibility and uniformity).

It is suggested that authority lists be developed for corporate headings (authors and issuing bodies) to permit entry of these data elements by codes and to achieve uniformity. IFLA has sponsored a study of corporate headings which should be carefully considered.

Transliteration and translation pose a number of problems with many alternative solutions. It is suggested that at the outset transliteration be left to the discretion of the user by providing a unique code for each letter symbol in the machine record enabling local conversion to any transliteration scheme desired. Carrier language questions must be given priority especially to resolve key issues of classification and indexing presentation.

The need for the Joint Project Group to produce a common communication format by a particular date means that design decisions must often be taken as best they can within the framework of existing or developing standards (or lack of suitable standards). This in turn means that particular practices become of necessity entrenched in the system, and are more difficult to modify at a later date.

The U.S. Project Group wishes to emphasize that significant variations from widely accepted common practices for achieving compatibility should be avoided.

Office of Science Information Service
National Science Foundation
June 27, 1974

US-USSR COOPERATION IN SCIENTIFIC AND TECHNICAL INFORMATION

DRAFT PROJECT PLAN
for

Project No. 2 - Improving Methods of Forecasting Information Requirements and Services

For this topic the U.S. suggests five problems of initial work, with concentration on the first two. These are:

1. Measurement of the cross-citations of work in the other country within the U.S. and U.S.S.R. scientific and technical literature. Methodology would have to be established, followed by joint projects in selected areas of scientific and technical publication. Initial results would provide a baseline for periodically measuring and projecting changes in citations within and between fields and for broader fields of literature in each country.

Effort in the initial seminar would focus on presenting and analyzing methods for conducting joint studies and selection of fields for study. Specialists in each country could exchange papers in advance, and then come prepared to resolve theoretical and methodological issues, prepare a common research design, and establish a work plan. Results could be reported at the second seminar.

2. Measurement of the production of scientific and technical literature. The U.S. sees this as a basic study--one necessary to any forecasting of information developments of any kind.

The U.S. proposal is that the U.S.S.R. and the U.S. undertake common studies of changes in production of literature in our two countries, using compatible research designs, meas-

urement, and projection methods. Our initiative could provide the basis for a similar UNISIST-managed world-wide effort. We could use an approach similar to that for the first topic. Papers outlining theoretical bases, methods, and so on could be exchanged in advance, and the seminar time could be devoted to development of the bases for common studies. The two research teams could exchange results at the second seminar.

3. Consideration of the future of abstracting and indexing services.

The U.S. proposes that this topic be treated in a conventional seminar fashion. We do not propose any continuing joint research effort. Rather, we suggest that each country seek a person to provide an overview of expected lines of development, discuss obstacles or issues confronting the growth of these services, and perhaps offer an analysis of the economic problems facing these services. We might want to arrange to have one or two persons serve as discussants of the two papers. Others, of course, could be invited to this portion of the seminar.

4. Discussion of the non-statistical estimations of the likely changes in how scientific and technical information may be disseminated and used, say ten years hence. We have in mind analysis of the directions of primary journal publication, coverage of secondary services, networking arrangements, likelihood of substitution of sdi services for parts of the present

primary and secondary services, use of on-line retrieval, or ways hard copy may be obtained. In short, we propose a general discussion of the broad directions of changes expected in the transmission and use of information.

Again, this topic could be treated in the convention seminar fashion, with a paper from each country, followed by discussants' remarks and general discussion by all participants.

5. Analyses of user studies, with emphasis on development of methodologies for improving measurement and projection of demand for information. There have been thousands of user studies in the U.S., but the results are not useful for estimating demand. We are less well informed about the situation in the Soviet Union. We propose that a person in each country prepare a critical review paper on this topic for presentation and discussion at the seminar.

This topic would be treated in a conventional seminar fashion, with discussants' comments and general discussion. From the discussion, we might derive guidance for possible development of joint work.

In summary, the U.S. suggests:

1. Preparation of theoretical and methodological papers, exchanged in advance, leading to development of common research projects on cross-citation of literature and the changes in the production of literature in each country. Seminar time would be devoted

to developing common research designs, methods and analyses. A small team, perhaps only three to five persons, would concentrate on these problems for perhaps three days or even a week. One way we may approach these two problem areas is to have the two sets of specialists (U.S. and U.S.S.R.) meet during the week prior to the broader seminar and then to present their results to the rest of the seminar.

2. Presentation of papers during the seminar on the future of abstracting and indexing services, estimations of broad changes in the dissemination and use of information, and critical review of user studies to develop ways of estimating demand for information.

Office of Science Information Service
National Science Foundation
June 27, 1974

US-USSR COOPERATION IN SCIENTIFIC AND TECHNICAL INFORMATION

DRAFT PROJECT PLAN
for
Project No. 3 - Development of Methods for Estimating Costs
and Benefits of Information Services

The United States proposes that eight topics be considered for presentation at the first US-USSR Symposium on Cost/Benefit Analysis of Scientific and Technical Information. Leading U.S. and U.S.S.R. economists and information specialists will prepare papers on topics such as described below.

Please consider the annotations as suggestive only.

1. The Evaluation of the Benefits of Scientific and Technological Information to a Firm. The purpose of this paper would be to formulate and discuss models to help answer questions like: How much is information of various kinds worth to a firm? How can a firm go about answering this kind of question? What sorts of models and econometric techniques can be devised or adapted to answer this sort of question? The emphasis here is on the particular firm (or government agency) and its problems and perspectives.

2. The Evaluation of the Social Benefits of Scientific and Technological Information. The purpose of this paper would be to formulate and discuss models to help answer questions like: How much is information of various kinds worth to the economy as a whole? How can theoretical and statistical techniques be brought to bear on this question? Clearly, the role of externalities and the public-good aspects of scientific and technological information play an important role in this discussion.

3. The Applicability of Benefit-Cost Analysis to Scientific and Technological Information. Over the past decades, economists have devoted a great deal of energy to the development of a set of techniques that can be characterized as "benefit-cost analysis." To what extent and in what ways can benefit-cost analysis, in its present form, contribute to better decision-making concerning the production and dissemination of scientific and technological information? Among the specific topics that might be addressed here is the proper discount rate, the proper way of handling consumer's surplus, and the proper way of incorporating and measuring uncertainty.

4. The Applicability of Bayesian Analysis and Statistical Decision Theory to Policy Making Concerning Scientific and Technological Information. During the past couple of decades, economists and statisticians have devoted a great deal of work to the development of a set of concepts and techniques that can be characterized as "statistical decision theory." To what extent and in what ways can statistical decision theory, in its present form, contribute to better policy formation concerning the production and dissemination of scientific and technological information?

5. The Applicability of Econometric Studies of Production Functions and Technological Change to Policy-Making Concerning Scientific and Technological Information. Another area of considerable interest to economists in recent years has been the econometric study of technological change at both the macro and micro levels.

To what extent is it possible to extend existing models to include the production and dissemination of scientific and technological information? How can we measure the relevant informational inputs? What approaches should be tried?

6. - 8. Case Studies of the Measurement of Benefits from Scientific and Technological Information. Three papers might be given which would describe case studies of the measurement of benefits from scientific and technological information. One paper might survey the studies (like those by Lave and Nelson and Winters) that try to evaluate the benefits from better forecasting techniques. Another paper might survey the studies that attempt to evaluate the benefits from various forms of important new technological information. Another paper might look at the journals or libraries or both.

Office of Science Information Service

National Science Foundation

June 27, 1974

US/USSR AGREEMENT ON SCIENTIFIC AND TECHNICAL COOPERATION
SCIENTIFIC AND TECHNICAL INFORMATION

US/USSR Joint Working Group on Scientific and Technical Information

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Project Group on Improving Methods of Forecasting Information Requirements
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Project Group on Testing and Developing a Common Communication Format for
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first item

REVIEW OF STATUS OF PROJECTS

STATINTL

1. Energy R&D

9 projects. 2 (MHD and Superconducting) will be covered in detail by project chairmen, as among promising projects, next on agenda. Remainder essentially still in initial stages of project group visits and efforts to define and organize cooperation. Specifics:

OSI
OSR
SB
CAGI
Commerce
Hellenic
4mil
Thermal power stations (TVA) - US project group visited USSR last Fall; Soviet group will come later this year.

Hydroelectric power stations (Interior) - Plans being discussed for project visits this year.

Heat rejection (AEC) - Soviet group will make first visit here this month.

Air pollution reduction and waste disposal systems for thermal power plants (TVA) - Soviet group here last December; return visit by US group later this year.

UHV/HVDC (Bonneville) - US group in USSR in February.

Electric Power System Planning and Dispatching (TVA) - Soviet group here at end of May.

Solar/Geothermal (NSF) - Preliminary discussions when US team visited Moscow in January; 2 Soviet groups due here this month but 1 postponed to October; US groups due to visit USSR in August/September.

- 2 -

2. Chemical Catalysis

5 Projects. 5 US Research Fellows now in USSR for at least 3 months each. Will be discussed in detail later.

3. Computer Applications

3 Projects well defined, 2 others in process of further definition. US research materials sent; none received yet in return. Extensive schedule of visits over coming year, including attendance at some scientific conferences in USSR, developed by US WG Chairman (Aufenkamp). Soviet responses slow but recently more responsive; Aufenkamp is optimistic, in restrained way. One apparent problem: Soviet WG Chairman has been ill.

4. Water Resources

4 Projects. Beginning to move, although still sluggish. Problems on US side include personnel changes in Bureau of Reclamation (Interior), which responsible for 3 of the projects. 1st project meeting held in May in Moscow; other 2 planned this summer. Re fourth project--Cold Weather Construction (Corps of Engineers)--Soviets have proposed shifting to Energy area, for bureaucratic reasons..

5. Microbiology

5 projects. Proposals to further define activities exchanged. Third Joint WG meeting began June 10 here in Washington. US Chairman believes should not be too hard to reach agreement and is hopeful that some joint work can soon begin. NSF fully prepared to fund.

- 3 -

6. Science Policy

4 projects. Dr. Beckler will describe later in agenda.

7. S&T Information

3 projects. Project teams have been organized on US side, and are developing specific program plans to send to Soviet side this month. Joint WG to meet in Moscow in September to review and approve project plans, so work can then begin. One project group will also meet there at same time.

8. Forestry Research and Technology

Soviet group had been due for return visit this month, but had to postpone. Now rescheduled for October. Nothing much has happened.

9. Metrology/Standardization

Also little movement. US proposed in January that split into 2; Soviets have indicated agreement.

| LaQue will head US group on Standardization to visit Moscow later this month.

10. Electrometallurgy

Soviet group here at end of May. Dr. Promisel will report on prospects.

11. Physics

No information on whether steps have actually been taken by Soviet Academy to organize a "joint research organ" on problems of theoretical physics.

12. Intellectual Property

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US group still getting organized.